Notice of Allowability	Application No.	Applicant(s)	
	09/341,151	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Michael P. Mooney	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amdt 8/6/03*.
2. ☒ The allowed claim(s) is/are *1-40*.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
   (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

8. ☐ CORRECTED DRAWINGS must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No. ____.
   (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
   (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1☐ Notice of References Cited (PTO-892)
2☐ Notice of Informal Patent Application (PTO-152)
3☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
4☐ Interview Summary (PTO-413), Paper No.____ .
5☐ Information Disclosure Statements (PTO-1449), Paper No. ____.
6☐ Examiner's Amendment/Comment
7☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
8☒ Examiner's Statement of Reasons for Allowance
9☐ Other .

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art, either alone or in combination, does not disclose or render obvious: actuator substrate including a plurality of discrete actuator elements fixed thereto; a display device comprising a crosspiece formed at a portion other than the pixel structure between the optical waveguide plate and the actuator substrate in combination with the rest of claim 1.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than actuator elements, of an actuator substrate arranged with the actuator elements corresponding to a large number of pixels; a pressurizing step of laminating and pressurizing an optical waveguide plate (OWP) in a state in which at least the pixel structures (PSs) are not hardened, and then hardening at least the PSs in combination with the rest of claim 14.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than portions corresponding to a large number of actuator elements, of an optical waveguide plate (OWP); a pressurizing step of laminating an actuator substrate (AS) arranged with actuator elements corresponding to a large number of pixels, on the crosspiece and the pixel structures , and pressurizing the OWP and AS in directions to make approach to one another in combination with the rest of claim 15.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than actuator elements, of an actuator substrate arranged with the actuator elements corresponding to a large number of pixels; a pressurizing step of laminating a surface of the AS formed with said crosspieces and a surface of the OWP formed with said PSs with each other, and pressurizing the OWP and AS in directions to make approach to one another in combination with the rest of claim 16.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than portions corresponding to a large number of actuator elements, of an optical waveguide plate (OWP); a pressurizing step of laminating a surface of the AS formed with the SPs and a surface of the OWP formed with said crosspieces with each other, and pressurizing the OWP and AS in directions to make approach to one another in combination with the rest of claim 17.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a pixel-forming step of forming pixel structures on respective actuator elements (AEs) of an AS arranged with said AEs of a number corresponding to a large number of pixels and integrally having a plurality of crosspieces at portions other than AEs in combination with the rest of claim 18.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of

forming a plurality of crosspieces at portions other than actuator elements, of an actuator substrate arranged with the actuator elements of a number corresponding to a large number of pixels; a second laminating step of removing the plate member, and then laminating an OWP at least on the crosspieces in combination with the rest of claim 19.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than portions corresponding to a large number of pixels, of a plate member (PM); a second laminating step of removing the plate member to transfer the crosspieces and the PSs to the AS, and then laminating an OWP on at least the crosspieces in combination with the rest of claim 20.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than actuator elements, of an actuator substrate arranged with the actuator elements of a number corresponding to a large number of pixels; a second laminating step of removing the plate member to transfer the the PSs to the AS, and then laminating an OWP on at least the crosspieces in combination with the rest of claim 21.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than portions corresponding to a large number of pixels, of a plate member (PM); a second laminating step of removing

the plate member to transfer the crosspieces and the PSs to the AS, and then laminating an OWP on at least the crosspieces in combination with the rest of claim 22.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a pixel-forming step of forming pixel structures on respective actuator elements (AEs) of an AS arranged with said AEs of a number corresponding to a large number of pixels and integrally having a plurality of crosspieces at portions other than AEs in combination with the rest of claim 23.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of removing a jig, and then forming a plurality of crosspieces at portions other than actuator sections, of the actuator substrate; and a second laminating step of laminating an OWP on at least the crosspieces on the AS in combination with the rest of claim 24.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of removing a jig, and then forming a plurality of crosspieces at portions other than portions corresponding the large number of pixels, of an OWP; and a second laminating step of laminating a surface of the actuator substrate formed with the PSs and a surface of the OWP formed with the crosspieces with each other in combination with the rest of claim 25.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a first laminating step (LS) of laminating said surface of said jig formed with said size-defining members and said

crosspieces and a surface of said AS formed with said PSs with each other; a second LS of removing said jig to transfer said crosspieces to said actuator substrate, and then laminating an OWP on at least said crosspieces of said AS in combination with the rest of claim 26.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than actuator elements, of an actuator substrate arranged with the actuator elements corresponding to a large number of pixels; a second laminating step of removing the jig, and then laminating an OWP on at least the crosspieces on the AS in combination with the rest of claim 27.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of forming a plurality of crosspieces at portions other than actuator elements, of an actuator substrate arranged with the actuator elements corresponding to a large number of pixels; a second laminating step of removing the jig to transfer the PSs to the AS, and then laminating an OWP on at least the crosspieces on the AS in combination with the rest of claim 28.

The prior art, either alone or in combination, does not disclose or render obvious a method for producing a display device comprising a crosspiece-forming step of using a jig including, on one surface of a PM, a large number of size-defining members (SDMs) formed to have substantially the same height as that of the crosspieces to be formed on an AS to form said plurality of crosspieces at portions formed with no SDMs,

of a surface of said jig formed with said SDMs, saiud portions being other than portions corresponding to a large number of pixels; a second LS of removing said jig to transfer said crosspieces and said PSs to said AS, and then laminating an OWP on at least said crosspieces in combination with the rest of claim 29.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 703-308-6125. The examiner can normally be reached during weekdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 703-308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956. An alternative useful number for status inquiries is 703-306-3329.

Michael P. Mooney
Examiner
Art Unit 2877

Frank G. Font
Supervisory Patent Examiner
Art Unit 2877

FGF/mpm
9/8/03